

Licensee: Sooner Dial Company

Address: 1002 South 10th Street
Clinton, Oklahoma

Radiation Safety Officer

Harold C. Bay.

People Talked to in Course of Inspection

Harold C. Bay and Charles E. Owens, General Manager.

Information about User Organization

This company is engaged in the refinishing of aircraft instrument dials with radioactive and nonradioactive paint. Many of the dials which are returned for refinishing have been painted with radioactive paint in the past. These are opened in the front office by the secretary, transferred to the shop, where they are stored awaiting processing, and the old paint is stripped in a pot containing a solvent. The dial is then re-finished using the appropriate paint as required.

Inventory of Radioactive Material

At the time of inspection, there was on hand 3 vials of paint containing approximately 0.3 millicuries of radium each.

Use Made of Material

This radium paint is used in the painting of aircraft instrument dials.

Personnel Monitoring Devices

None.

Personnel Exposures

Personnel exposure could not be determined since no personnel monitoring devices were in use.

Survey Instruments

None.

Survey Procedures

None.

Safety Procedures and Emergency Plan

None.

Leak Testing

Not required since these sources are not sealed.

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Storage Facilities

The radium paint is stored in a lead-box underneath a work bench. There are also stored many empty vials which had contained radium paint in the past. These vials are stored underneath a work bench.

Posting

None.

Results of Inspector's Survey

It was found that the work area was grossly contaminated with radium paint. All areas in the shop were contaminated with levels from 7500 to 300,000 counts per minute of alpha radiation as measured with the PAC 1SA. Five wipe samples were taken in areas which were surveyed directly. All of the wipes showed removable contamination from 460 to 42,778 dpm per 100² cm. The pot which is used for removing paint from old dials prior to refinishing showed 18 mr per hr at the surface of the pot. The secretary's desk where the mail is opened showed 7500 cpm of alpha contamination as measured with the PAC 1SA. The results of this survey are shown on the attached sketch.

Waste Disposal

Mr. Bay stated that at intervals of approximately 6 months he removed the sludge from the stripping pot, took it to the sanitary landfill, dug a small hole and poured the sludge into the hole. The sanitary landfill operator then covered the material with refuse and dirt to a depth of from 20 to 50 feet. The vials which had contained radioactive material and been emptied were stored underneath the bench in the shop.

Records

None.

Remarks

At the time of the inspection, I made the following recommendations:

1. Dispose of glass bench tops.
2. Strip paint from bench tops and repaint with epoxy paint.
3. Since only a small amount of radium paint is kept on hand at any one time, put the paint in a small lead box for storage.
4. Install a hood for storage of dials awaiting processing and the paint which is on hand.
5. Ship empty bottles and sludge from the strip tank to a commercial disposal firm.
6. Get a film badge service.

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7. Post the entrance to the shop with "Caution-Radiation Area" and "Caution-Radioactive Materials."
8. Make a general cleanup and establish a routine cleanup procedure.
9. Obtain some sort of instrumentation which will detect the spills of radioactive material. This instrumentation should be capable of detecting alpha particles, however, it is possible that a black light would enable them to locate any spots of paint. Of course the black light would not enable them to distinguish between radioactive and non-radioactive paint.

Date Inspected: June 23, 1965

Inspecting Officer
R. L. Craig
Oklahoma State Department
of Health